CLAIMS

What is claimed is:

1. A computer operable method for identifying mis-routing of calls in a telephone system, comprising the steps of:

selecting a first and second call records, providing the call records comprise call characteristic information created at separate locations in the telephone system and providing the call records identify same called station;

establishing whether first and second call records are correlated; and

when first and second call records are correlated,

establishing a measure of the probability of call mis-routing.

2. A computer operable method as recited in claim 1, wherein the method step for establishing whether the first and second call records are correlated comprises:

subtracting a first timestamp included with the first call record from first timestamp included with the second call record, wherein first timestamp is time of a call initiation signal;

when the absolute value of the result of first timestamp subtraction method step is greater than a first preselected value,

identifying first and second call records as uncorrelated;

otherwise,

identifying first and second call records as correlated; and

when first and second call records are identified as correlated and a second timestamp included with first and second call records is used to establish correlation of first and second call records,

subtracting the second timestamp of the first call record from the second timestamp of the second call record, wherein second timestamp is the time of a first party disconnect signal; and

when the absolute value of the result of second timestamp subtraction method step is greater than a second preselected value,

identifying first and second call records as uncorrelated.

3. A computer operable method as recited in claim 2, wherein the method step for establishing whether the first and second call records are correlated further comprises:

when first and second call records are identified as correlated and a third timestamp included with first and second call records is used to establish correlation of first and second call records,

subtracting the third timestamp of the first call record from the third timestamp of the second call record, wherein third timestamp is the time of a call connect signal; and

when the absolute value of the result of third timestamp

subtraction method step is greater than a third preselected value,

identifying first and second call records as uncorrelated;

when first and second call records are identified as correlated, the identity of a calling station included in first and second call records is used to establish correlation of first and second call records, and when the call records identify different calling stations,

identifying first and second call records as uncorrelated;

when first and second call records are identified as correlated, the charge number of the calling station included in first and second call records is used to establish correlation of first and second call records, and when the call records identify different charge numbers,

identifying first and second call records as uncorrelated; and

when first and second call records are identified as correlated, the jurisdiction of the call included in first and second call records is used to establish correlation of first and second call records, and when the call records identify different jurisdictions,

identifying first and second call records as uncorrelated.

4. A computer operable method as recited in claim 1, wherein the method step for establishing the measure of the probability of call mis-routing comprises:

when a forward interworking parameter bit is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls wherein forward interworking parameter bit is set;

when a backward interworking parameter bit is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls wherein backward interworking parameter bit is set;

when percentage of calls wherein identity of the calling station is included in the call records is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls wherein the identity of the calling station is included in the call records;

when percentage of calls terminating in an independent local exchange carrier is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls terminating in an independent local exchange carrier;

when percentage of calls wherein jurisdiction indicator parameter is available is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls wherein the jurisdiction indicator parameter is available;

when percentage of calls wherein carrier identification parameter is

available is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls wherein the carrier identification parameter is available; and

when percentage of calls wherein the number of area codes associated with the calling station is used to establish a measure of the probability of call mis-routing,

identifying the number of area codes associated with the calling station; and

combining results of above method steps.

5. A computer operable method as recited in claim 1, wherein the method step for establishing the measure of the probability of call mis-routing comprises:

creating a historical traffic profile of first and second connecting carriers, wherein the connecting carriers connect to the local exchange carrier;

computing the degree to which traffic profiles of first and second connecting carriers change inversely to each other; and

using the results of the computation method step to establish the measure of the probably of call mis-routing.

6. A computer program storage medium readable by a computer, tangibly embodying a computer program of instructions executable by the computer to perform method steps for identifying mis-routing of calls in a telephone system, the steps comprising:

selecting a first and second call records, providing the call records comprise call characteristic information created at separate locations in the telephone system and providing the call records identify same called station;

establishing whether first and second call records are correlated; and

when first and second call records are correlated,

establishing a measure of the probability of call mis-routing.

7. A computer program storage medium as recited in claim 6, the step for establishing whether the first and second call records are correlated comprising:

subtracting a first timestamp included with the first call record from first timestamp included with the second call record, wherein first timestamp is time of a call initiation signal;

when the absolute value of the result of first timestamp subtraction method step is greater than a first preselected value,

identifying first and second call records as uncorrelated;

otherwise,

identifying first and second call records as correlated; and

when first and second call records are identified as correlated and a second timestamp included with first and second call records is used to establish correlation of first and second call records,

subtracting the second timestamp of the first call record from the second timestamp of the second call record, wherein second timestamp is the time of a first party disconnect signal; and

when the absolute value of the result of second timestamp subtraction method step is greater than a second preselected value,

identifying first and second call records as uncorrelated.

8. A computer program storage medium as recited in claim 7, the step for establishing whether the first and second call records are correlated further comprising:

when first and second call records are identified as correlated and a third timestamp included with first and second call records is used to establish correlation of first and second call records,

subtracting the third timestamp of the first call record from the third timestamp of the second call record, wherein third timestamp is the time of a call connect signal; and

when the absolute value of the result of third timestamp subtraction method step is greater than a third preselected value,

identifying first and second call records as uncorrelated;

when first and second call records are identified as correlated, the identity of a calling station included in first and second call records is used to establish correlation of first and second call records, and when the call records identify different calling stations,

identifying first and second call records as uncorrelated;

when first and second call records are identified as correlated, the charge number of the calling station included in first and second call records is used to establish correlation of first and second call records, and when the call records identify different charge numbers,

identifying first and second call records as uncorrelated; and

when first and second call records are identified as correlated, the jurisdiction of the call included in first and second call records is used to establish correlation of first and second call records, and when the call records identify different jurisdictions,

identifying first and second call records as uncorrelated.

9. A computer program storage medium as recited in claim 6, the step for establishing the measure of the probability of call mis-routing comprising:

when a forward interworking parameter bit is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls wherein forward interworking

parameter bit is set;

when a backward interworking parameter bit is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls wherein backward interworking parameter bit is set;

when percentage of calls wherein identity of the calling station is included in the call records is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls wherein the identity of the calling station is included in the call records;

when percentage of calls terminating in an independent local exchange carrier is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls terminating in an independent local exchange carrier;

when percentage of calls wherein jurisdiction indicator parameter is available is used to establish a measure of the probability of call mis-routing,

identifying the percentage of calls wherein the jurisdiction indicator parameter is available;

when percentage of calls wherein carrier identification parameter is available is used to establish a measure of the probability of call mis-

routing,

identifying the percentage of calls wherein the carrier identification parameter is available; and

when percentage of calls wherein the number of area codes associated with the calling station is used to establish a measure of the probability of call mis-routing,

identifying the number of area codes associated with the calling station; and

combining results of above method steps.

10. A computer program storage medium as recited in claim 6, the step for establishing the measure of the probability of call mis-routing comprising:

creating a historical traffic profile of first and second connecting carriers, wherein the connecting carriers connect to the local exchange carrier;

computing the degree to which traffic profiles of first and second connecting carriers change inversely to each other; and

using the results of the computation method step to establish the measure of the probably of call mis-routing.